

BRITISH MUSEUM (NATURAL HISTORY).

REPORT ON CETACEA STRANDED ON THE BRITISH COASTS DURING 1913

(WITH ONE TEXT-FIGURE AND THREE MAPS).

BY

S. F. HARMER, Sc.D., F.R.S.

Keeper of the Department of Zoology.



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PREFACE.

THE instruction to Receivers of Wrecks, issued by the Board of Trade in 1912, at the request of the Trustees of the British Museum, to send telegraphic Reports of the stranding of specimens of Whales to the Museum has resulted in the collection of a number of records of British Cetacea. The system did not become fully operative before the early part of 1913, and it will require further elaboration before it gives all the information which it may be hoped to obtain. The present Report must be regarded as a first instalment, admittedly imperfect, of an attempt to obtain information with regard to the distribution of various species of Cetacea along the British coasts, at different seasons in the year.

It is hoped that further annual Reports will be published in due course, and that the system thus inaugurated will be of service in recording facts which, without it, would have remained unknown. Specimens of Cetacea have been thrown up on our coasts, from time to time, in the past; but only a very small proportion of these have received more than a cursory notice in some local newspaper.

The thanks of the Trustees are due to the Board of Trade and to the Admiralty for instituting the system of sending telegraphic Reports of the stranding of Cetacea; and to the Receivers of Wrecks and Coast Guard Officers who by their ready co-operation have made it a success. Many of these men have done their best to furnish all the information which it has been in their power to give, by supplementing the telegrams originally sent by means of written reports and by answering questions which have been addressed to them with the view of elucidating the facts. I desire to express my special thanks to all who have assisted in this way; and I would ask Naturalists who may have the opportunity of making personal observations on stranded Cetacea kindly to communicate the results of their specific determinations to the Museum, with the view of increasing the value of future Reports.

The enquiry was originally commenced with the object of obtaining specimens for the Museum; and it has already proved successful in securing several *desiderata*. The attention of the Officers of other Museums may be called to the system which is now in working order. Considerations of expense make it impossible to acquire more than a small proportion of the Cetacea reported; and it might be possible to assist other Museums to obtain specimens of which they were in need if notice had been given beforehand to the British Museum that representatives of particular species were required.

SIDNEY F. HARMER,
Keeper of Zoology.

BRITISH MUSEUM (NATURAL HISTORY),
LONDON, S.W.
February, 1914.



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REPORT ON CETACEA STRANDED ON THE BRITISH COASTS DURING 1913.

On June 19, 1912, the Board of Trade wrote to the Director of the British Museum to say that the Board had decided to issue a circular to all Receivers of Wrecks, instructing them to send telegraphic information of the stranding of Whales to the Museum. After some delay a leaflet, prepared for the use of Coast Guard Officers, was approved by the Trustees (Jan. 25, 1913) and was shortly afterwards circulated to the persons for whom it had been intended. The records for 1913 which are given below are the result of this action.

(1) NUMBER OF SPECIMENS OF CETACEA STRANDED.

The number of Whales, Dolphins, etc., reported during 1913 was 76. The list given below includes, however, three other records which were obtained during 1911 and 1912.

The number given cannot be regarded as completely accurate, because evidence has been forthcoming that some of the specimens originally reported as "Porpoises" have really been Sharks. Where this fact has been definitely ascertained the record in question has not been included in the list; but it is probable that a certain proportion, though perhaps not a large one, of the "Porpoises" which have been admitted to the list have also been Sharks.

(2) DATES.

In the list which follows, the specimens are given in the order in which they were reported as having been observed on the shore. This does not represent exactly the order of the dates of death, for two reasons:—(i) a specimen may have been lying on the beach for a day or two before it was noticed; (ii) some of the specimens were quite fresh when stranded, while others had been floating about for some time after death before they came ashore, as is shown by the decomposed condition in which they were found.

A large Whale was reported as having been stranded at Wick on July 14, 1913. This has not been given as a separate entry because there was reason to believe that the specimen in question was the individual which came ashore at Dunnet Head on July 8, and had subsequently been reported as having floated off.

(3) DETERMINATION OF THE SPECIES.

A definite determination of the species has been found possible in only a small proportion of the cases. This has generally been based on the examination of the entire animal, or some part of it, which has been forwarded to the Museum. In a few instances a representative of the Museum has visited the spot where the specimen was stranded, and the evidence thus obtained has been the authority for the determination. In one or two cases, the information furnished by the Coast Guard Officers has been so well given that the species could be ascertained with practical certainty; and determinations made in this way have been admitted into the list.

Some of the specimens reported have been buried immediately after the despatch of the telegram, or even before it was sent. It has thus been impossible to obtain additional information with regard to the length of the animal or the number and arrangement of its teeth. In the majority of cases, no determination has been attempted owing to the want of sufficient evidence; but, whenever possible, the total length as reported by the Coast Guards has been recorded. These measurements are probably not completely uniform, as it may be assumed that in some of them the length in a straight line has been intended, and in others the length measured along the curve. The length (80 feet) given by the Coast Guard for the Common Rorqual, No. 14, is almost certainly too high. But making some allowance for a margin of error, the total lengths recorded give some indication of what the species are likely to have been.

The majority of the smaller Cetacea have been announced, in the telegrams received, as "Porpoises." As it cannot be assumed that these were all Common Porpoises (*Phocaena phocaena*), this designation has been omitted in most of the instances where the length has been ascertained; but it has been inserted as a rough indication of the size of the specimen where the length was not known.

(4) LIST OF THE CETACEA REPORTED AS HAVING BEEN STRANDED ON THE BRITISH COASTS DURING 1913 (INCLUDING ALSO THREE RECORDS FOR 1911 AND 1912).

(Specimens of which the entire skeleton or some other part has been secured for the Museum are marked with an asterisk.)

Year.	No.	Date.	Locality.	County.	Length.	Species and Remarks.
					feet. ins.	
1911	A	July 1	Penzance . .	Cornwall . . . (Cf. Lydekker, <i>Field</i> , vol. cxviii, p. 176, 1911.)	20 6	* <i>Globicephala melana</i> , Traill (Blackfish or Pilot-Whale). A school of about 50 stranded; one specimen secured, of the length indicated.
	B	Sept. 23	Aberystwyth .	Cardigan . . .	—	* <i>Balaenoptera acutorostrata</i> , Lac. (Lesser Rorqual).
1912	C	June 13	Port Talbot .	Glamorgan . .	18 0	<i>Balaenoptera</i> sp. (probably Lesser Rorqual).

Year.	No.	Date.	Locality.	County.	Length.	Species and Remarks.
					feet. ins.	
1913	1	Feb. 13	Unionhall . .	Cork	26 0	* <i>Hyperoodon rostratus</i> , Müll. (Bottle-nosed Whale).
	2	Mar. 6	Christchurch .	Hampshire . .	18 0	<i>Globicephala melacna</i> , Traill (Blackfish or Pilot-Whale).
	3	" 6	Fair Isle . .	N.E. of Orkney .	6 6	* <i>Lagenorhynchus</i> sp. The skeleton is not yet available for examination.
	4	Apr. 21	Cromane . .	Kerry	—	"Blackfish" [? <i>Globicephala melacna</i> , Traill].
	5	May 6	Mablethorpe .	Lincolnshire . .	14 0	
	6	July 8	Dunnet Head and Wick	Caithness . . .	69 0	<i>Balaenoptera physalus</i> , L. (Common Rorqual).
	7	" 25	Tarbat Ness .	Ross and Cromarty	20-30 0	"Finner or Rorqual."
	8	Aug. 1	Coatham . .	Yorkshire . . .	—	"Porpoise."
	9	" 1	" . .	"	—	"Porpoise."
	10	" 1	" . .	"	—	"Porpoise."
	11	" 1	" . .	"	—	"Porpoise."
	12	" 1	" . .	"	—	"Porpoise."
	13	" 8	North Shields .	Northumberland .	26 0	"Headless Whale."
	14	" 9	Inishbofin . .	Donegal	80 0	<i>Balaenoptera physalus</i> , L. (Common Rorqual). The length recorded is probably too large.
	15	" 11	Coatham . .	Yorkshire . . .	—	"Porpoise."
	16	" 11	" . .	"	—	"Porpoise."
	17	" 12	Ballantrae . .	Ayr	27 0	
	18	" 21	Bacton . . .	Norfolk	3 0	
	19	" 23	Gorey	Jersey	11 8	<i>Grampus griseus</i> , Cuv. (Risso's Grampus).
	20	" 24	Collieston . .	Aberdeen	25 0	<i>Balaenoptera acutorostrata</i> , Lac. (Lesser Rorqual).
	21	" 25	Westray . .	Orkney Islands .	16-26 0	
	22	" 28	Fair Isle . .	N.E. of Orkney .	3 6	* <i>Phocæna phocæna</i> , L. (Common Porpoise).
	23	Sept. 6	Tunstall . .	Yorkshire . . .	27 0	<i>Balaenoptera</i> sp.
	24	" 7	Bacton . . .	Norfolk	3 2	
	25	" 7	Palling . . .	"	5 0	
	26	" 8	Happisburgh .	"	3 4	
	27	" 8	Sheringham .	"	—	"Porpoise."
	28	" 8	Sutton-on-Sea .	Lincolnshire . .	4 10	
	29	" 11	Bacton . . .	Norfolk	3 8	
	30	" 13	Blundell Sands .	Lancashire . . .	3 6	
	31	" 18	Donnanook . .	Lincolnshire . .	—	"Porpoise."
	32	" 19	Embleton . .	Northumberland .	—	"Large Porpoise."
	33	" 20	Coverack . .	Cornwall	—	"Large Porpoise."
	34	" 22	Lydd	Kent	7 0	Probably <i>Delphinus delphis</i> , L. (Common Dolphin).
	35	" 26	Arbroath . .	Forfar	25 0	* <i>Balaenoptera acutorostrata</i> , Lac. (Lesser Rorqual).
	36	" 26	Alderton . .	Suffolk	5 0	
	37	" 26	"	"	5 0	
	38	" 27	Skegness . .	Lincolnshire . .	13 0	* <i>Hyperoodon rostratus</i> , Müll (Bottle-nosed Whale).
	39	" 29	Mablethorpe .	"	5 6	
	40	" 29	Mevagissey . .	Cornwall	9 0	
	41	Oct. 1	Mablethorpe .	Lincolnshire . .	—	"Porpoise."
	42	" 1	"	"	—	"Porpoise."
	43	" 1	Happisburgh .	Norfolk	4 0	
	44	" 2	Birchington .	Kent	—	<i>Phocæna phocæna</i> , L. (Common Porpoise).

Year.	No.	Date.	Locality.	County.	Length.	Species and Remarks.
					feet. ins.	
1913	45	Oct. 2	Mablethorpe .	Lincolnshire .	5 0	
	46	" 2	Sutton Bridge .	"	25 0	" Bottle-nosed Grampus."
	47	" 4	Caister-on-Sea .	Norfolk	—	" Porpoise."
	48	" 5	Orford	Suffolk	11 6	Teeth said to be ¹⁴⁻¹⁴ ₁₂₋₁₂
	49	" 5	Bexhill-on-Sea .	Sussex	8 6	
	50	" 5	Cleggan	Galway	6 8	
	51	" 6	Flamborough .	Yorkshire . . .	—	" Whale without head or tail."
	52	" 6	Eyemouth . . .	Berwick	—	" Whale without head."
	53	" 8	Cromer	Norfolk	5 0	
	54	" 9	Aldeburgh . . .	Suffolk	15 0	
	55	" 10	North Uist . .	Hebrides	16 0	" Probably Lesser Rorqual."
	56	" 11	Felpham	Sussex	12 0	<i>Hyperoodon rostratus</i> , Müll. (Bottle-nosed Whale).
	57	" 11	Skinningrove .	Yorkshire . . .	5 0	
	58	" 11	Cromer	Norfolk	—	" Porpoise."
	59	" 12	Southbourne .	Hampshire . . .	20 0	
	60	" 14	Alderton	Suffolk	4 0	
	61	" 15	Islay	Argyll	9 0	* <i>Lagenorhynchus albirostris</i> , Gray (White-beaked Dolphin).
	62	" 17	Mablethorpe .	Lincolnshire . .	4 0	
	63	" 25	Brighthstone .	Isle of Wight . .	8 0	
	64	" 29	Sandwich	Kent	4 6	
	65	" 31	Crail	Fife	30 0	* <i>Balaenoptera acutorostrata</i> , Lac. (Lesser Rorqual).
	66	Nov. 1	Bournemouth .	Hampshire . . .	7 6	Described as Common Porpoise, and said to have had 24 spade-shaped teeth on each side of each jaw.
	67	" 4	Torcross	Devon	12 0	* <i>Grampus griseus</i> , Cuv. (Risso's Grampus).
	68	" 4	"	"	5 0	* Ditto; the fœtus or calf of the preceding specimen.
	69	" 21	Downings . . .	Donegal	6 7	* <i>Delphinus delphis</i> , L. (Common Dolphin).
	70	" 24	Lydd	Kent	3 0	
	71	Dec. 1	Keel	Mayo	6 6	* <i>Delphinus delphis</i> , L. (Common Dolphin).
	72	" 13	Dunaff	Donegal	18 0	
	73	" 17	Mevagissey . .	Cornwall	—	" Porpoise."
	74	" 19	Dungeness . . .	Kent	6 0	
	75	" 22	Hightown . . .	Lancashire . . .	5 0	
	76	" 18	Fort George . .	Inverness	48 0	<i>Physcter catodon</i> , L. (Sperm-Whale).†

(5) FREQUENCY OF THE OCCURRENCE OF STRANDED CETACEA DURING DIFFERENT MONTHS OF 1913.

The frequency of the records at different times in the year is represented in the curves on p. 9. The upper curve gives the number of records for the entire coast-line. The smaller curve gives the number of specimens recorded merely as "Porpoises," or of which the total length did not exceed five and a half feet, stranded on the East coast of England, as far South as the Straits of Dover, during July to November.

† Recorded by Mr. W. Taylor in 'The Scottish Naturalist,' Feb. 1914, p. 28.

The two curves have very marked characters, although the small number of specimens recorded during the first half of the year may have been due partly to the fact that the Coast Guards did not at first grasp fully the nature of their new responsibilities. But taking the facts as they stand, the larger curve shows a sudden rise from 2 specimens in July to 15 in August. The curve continues to ascend to 18 in September, and reaches a maximum of 21 in the first half of October. From this point it sinks suddenly to 4 in the second half of October, and remains at a low level during the remainder of the year.

It will be interesting to ascertain how far the curves of future years agree with this one; and thus to what extent the special frequency of the records during August, September and the first half of October has a definite significance. It may well have some relation to migration; but it is obvious that the curve of frequency is really a composite one, made up of the individual curves of several species. These species may not all have identical periods of migration, and in any case the form of the curve must be specially influenced by the number of records of the commonest species.

In a Report received from the Coast Guard at Coatham (Yorkshire) it was suggested that the frequency of the occurrence of stranded "Porpoises" at certain seasons of the year was due to the fact that they were individuals which, after being caught by fishermen in Herring-nets, had been killed and thrown overboard, and had subsequently drifted ashore. In order to estimate, to some extent, the correctness of this suggestion, another curve was constructed to show the frequency of the records of the smaller Cetacea (possibly including a few Sharks) in the North Sea, as far South as the Straits of Dover, during July to November. It is obvious from the figure that these records have had a marked effect on the larger curve, though it is also true that if they were subtracted from the total, the form of that curve would not be materially affected. It thus appears legitimate to conclude that a larger number of Cetacea which have not been captured by fishing boats are stranded during August, September and the first half of October than at other times of the year.



I have endeavoured to ascertain whether there is any definite connection between the movements of the Herring-shoals and the stranding of these smaller Cetacea. Mr. Henry G. Maurice, of the Board of Agriculture and Fisheries, has very kindly furnished me with figures showing the number of Herrings (in cwt.) landed from the North Sea during the successive months of 1913, together with an indication of the principal areas in which they were caught. An analysis of these figures gives the following results, for the English coast :—

The catch of Herring was almost negligible during the first three months of the year, not exceeding 200 cwt. in any month. In April the total catch was about 4,900 cwt., mostly from East of the Norfolk coast. In May about 38,000 cwt. were landed, principally from near the Northumberland and Durham coasts. In June it had risen to about 131,500 cwt., obtained from the same district and rather further North. In July more than 70 per cent. of a catch of nearly 394,000 cwt. came from inshore waters of Northumberland and Durham; and most of the rest from rather further North. In August, with about 427,000 cwt., more than half were caught near the coast of Durham and Yorkshire, as far South as Bridlington Bay; and most of the remainder further North. In September rather more than one-fifth of the total catch of about 520,000 cwt. was obtained from the Durham and North Yorkshire coasts; nearly one-eighth further from the coast, and respectively North and South of the Dogger Bank; while nearly one-fifth was obtained nearer land, off the Southern part of the Yorkshire coast. In the first half of October the Southerly migration had proceeded further, as is shown by the fact that with a total catch of over 1,107,000 cwt., about 782,600 cwt. were taken East of Norfolk, and about 82,500 cwt. North of Norfolk and East of Lincolnshire; though a certain number were still obtained off the Durham and North Yorkshire coast. In the second half of October the fishery was mainly to the East of Norfolk, nearly 2,300,000 cwt. of a total of nearly 2,386,000 cwt. being taken from that area. In November the total, 1,790,000 cwt., was still very high, about 1,715,400 cwt. being from the East of Norfolk. In December most of the total of 135,200 cwt. was from the same district and the Suffolk coast.

It is obvious that these figures do not altogether correspond with the curves given above of the stranded Cetacea; and in particular the sudden drop of those curves from the first half of October to the second half of the same month is by no means represented by the figures for the total catch of Herring during the same periods. But it may be noted that in September and the first half of October, when the number of stranded "Porpoises" was at its maximum along the Lincolnshire and Norfolk coasts, there was a considerable Herring fishery to the North of Norfolk. It is possible that the direction of the currents is more favourable to the stranding of dead Cetacea on the projecting parts of the coast of those counties, under those circumstances, than it is when, as in the second half of October, the headquarters of the Herring fishery are well to the East of Norfolk. It may further be noticed that in August, when 7 "Porpoises" were found near the mouth of the Tees, Herring were actually being caught

near the shore in that neighbourhood, while none were caught, in sufficient numbers to be indicated by the statistics, further South than Bridlington Bay, in Yorkshire.

It seems, therefore, that although the case is not certainly made out by the figures that have been quoted, there may be some connection between the stranding of the Cetacea and the position of the Herring fishery at the time. Mr. Maurice has sent me one or two opinions from Naturalists connected with the Board of Agriculture on this subject. These, while not entirely in agreement with one another with regard to details, show that Herring-shoals in the North Sea are certainly followed by some species of Cetacea, among which are mentioned Bottle-nosed Whales and Common Dolphins.

(6) DISTRIBUTION ON THE COAST-LINES.

The details of the distribution of the stranded Cetacea are given in the tabular statement which is printed above, and also in the maps which appear at the end of this Report. The list is a chronological one, and the numbers there used re-appear on the maps. It is perhaps surprising to find that far the largest number of records belongs to the North Sea. The district where they are most numerous is the coast of Lincolnshire and Norfolk. The majority of these specimens are "Porpoises," or, in other words, smaller kinds of Cetacea; including probably Common Porpoises (*Phocaena phocaena*) and perhaps White-beaked Dolphins (*Lagenorhynchus albirostris*). It must, however, be remarked that the evidence is at present very incomplete with regard to the determination of these smaller Cetacea.

The map of England gives a distinct indication of a Southward movement of the smaller Cetacea as the summer advances. Analysing the smaller curve given above, by comparing it with the map, it will be seen that of the 8 "Porpoises" recorded in August, 7 are from the Tees (near Coatham) and 1 from Norfolk (Bacton). In September none appear so far North as Yorkshire, except possibly No. 32, which has not been included; while of the 10 specimens recorded, 3 are from Lincolnshire (Donnanook, Mablethorpe, Sutton-on-Sea), 5 from Norfolk (Sheringham, Bacton, Happisburgh, Palling), and 2 from Suffolk (Alderton). In the first half of October, with 10 records, 1 is from Yorkshire (Skinningrove), 3 are from Lincolnshire (Mablethorpe), 4 from Norfolk (Cromer, Happisburgh, Caister-on-Sea), 1 is from Suffolk (Alderton), and 1 is from Kent (Birchington-on-Sea). In July and November no "Porpoises" were recorded from the district in question. There is some reason to believe that the Bottle-nosed Whale (*Hyperoodon rostratus*) is not uncommon on the coast of East Anglia during the summer and autumn.

The occurrence of Risso's Grampus (*Grampus griseus*) in the English Channel during the late summer and autumn is of some interest. Three definite records of this species were obtained (Gorey, Torcross), but the Torcross specimens were an adult with its fetus or calf. It is not impossible that one or two of the other records in the same region may have referred to this species.

The stranding of a large school of Pilot-Whales (*Globicephala melaena*) in Mounts Bay, near Penzance, in the month of July, was a notable event during 1911.

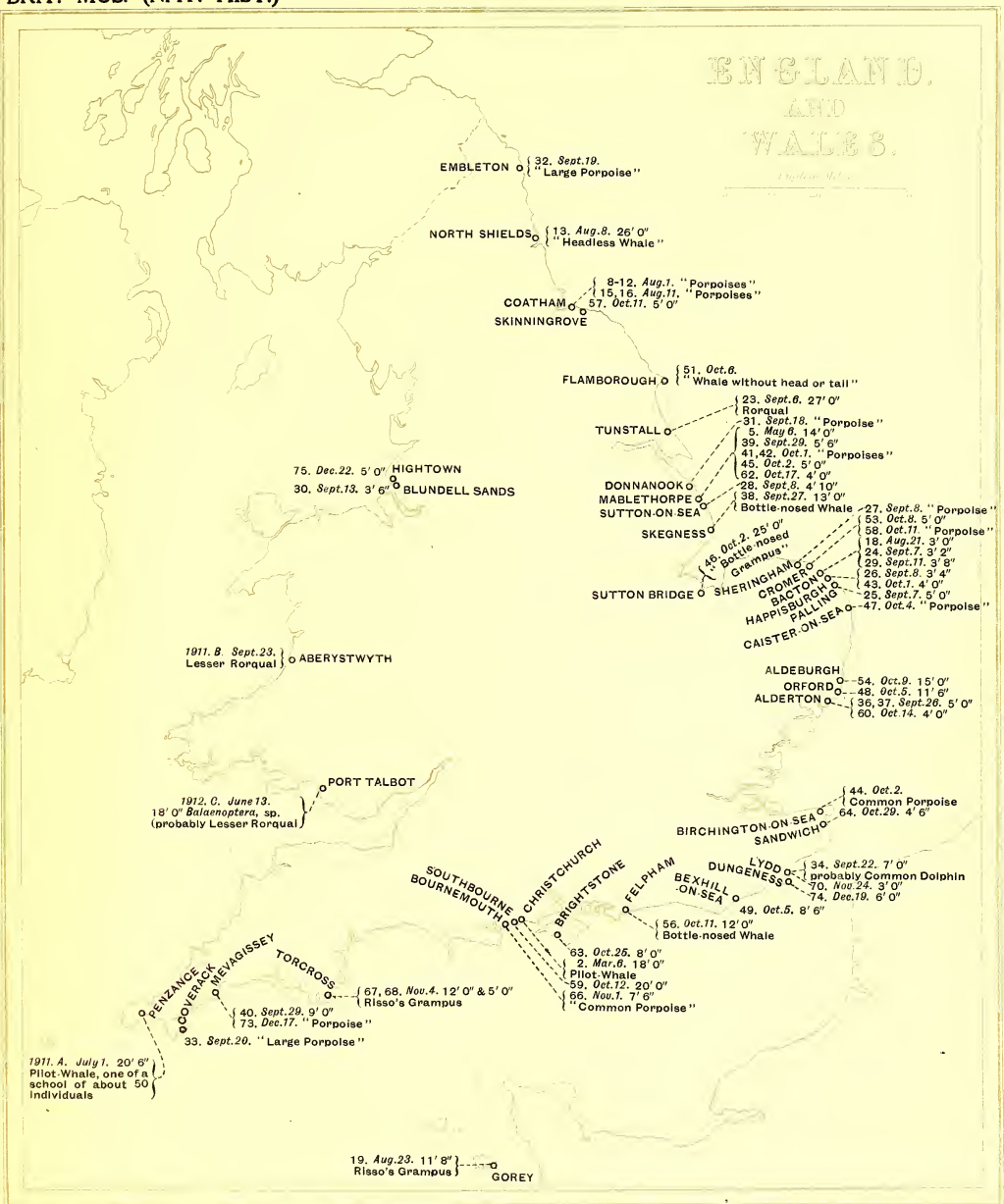
The Common Dolphin (*Delphinus delphis*) was definitely ascertained to have occurred on the North and West coast of Ireland (Downings, Keel) during November and December; while it is probable that the record from Cleggan in October belongs to the same species. It is almost certain that a record from Kent (Lydd), during September, indicates that the Common Dolphin had made its way up the English Channel during the summer.

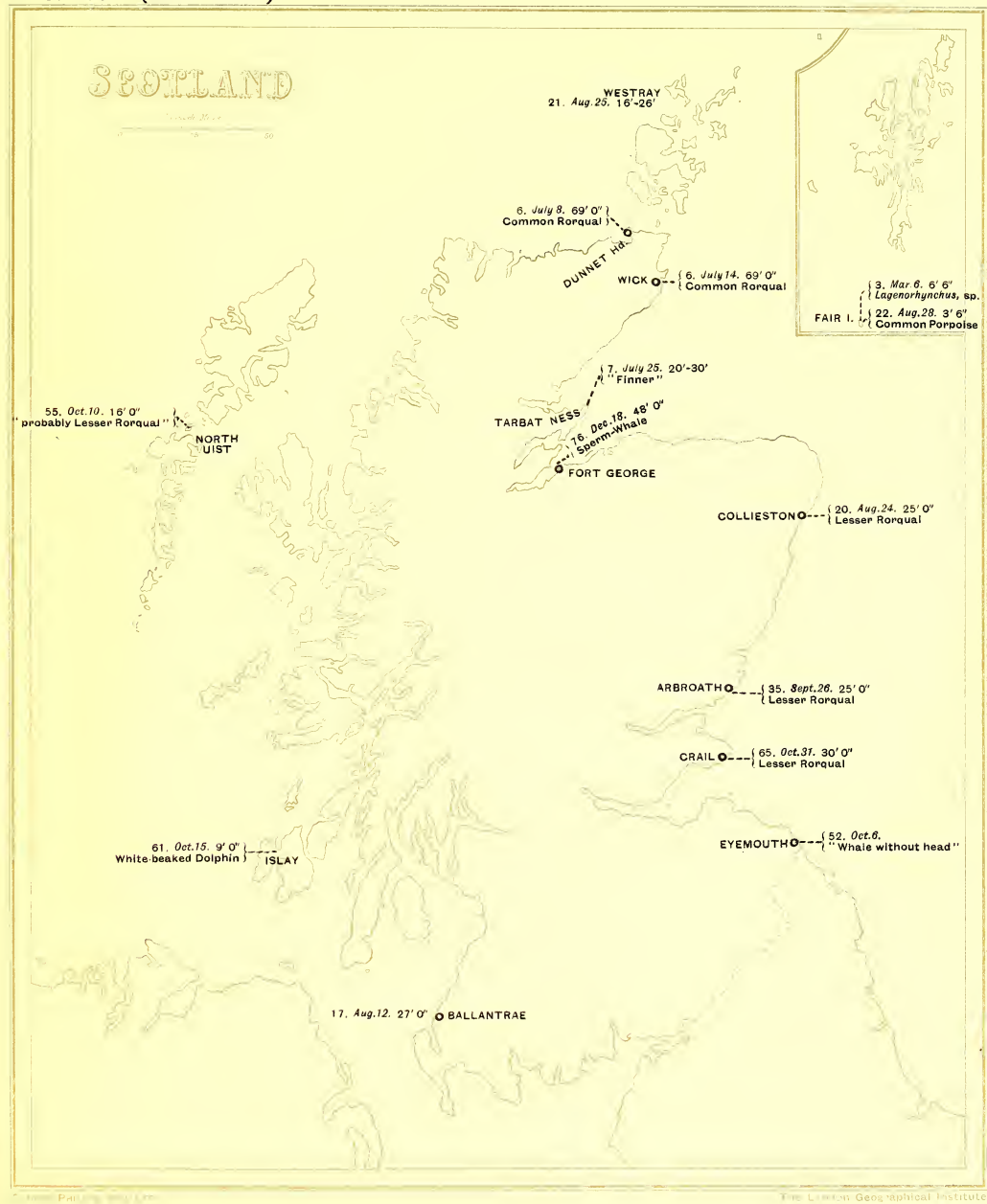
In the map of Scotland one of the most noteworthy features is the evidence afforded of a southerly movement of the Lesser Rorqual (*Balaenoptera acutorostrata*) during the summer. The record from Tarbat Ness (July) certainly belonged to a Rorqual and very probably to this species. Those for Collieston (August), Arbroath (September), and Crail (October) were proved to have referred to Lesser Rorquals. The information obtained from the more Southern part of the East coast is less precise with regard to this point; but it is at least possible that the specimens from Eyemouth (October), North Shields (August), and Tunstall (September) belonged to the same species; which also occurred on the Welsh coast (Port Talbot,* Aberystwyth) in two localities during 1911 and 1912. The entire absence of records of any species on the East coast of Ireland may also be noticed. Two "Porpoises" were recorded during 1913 from the opposite coast of England, which had no other stranded Cetacea during the year.

Only two of the larger Whales were definitely reported during 1913; namely, a Common Rorqual (*Balaenoptera physalus*) from the North coast of Ireland (Inishbofin) during August, and another individual of the same species from the North of Scotland (Dunnet Head, Wick) during July.

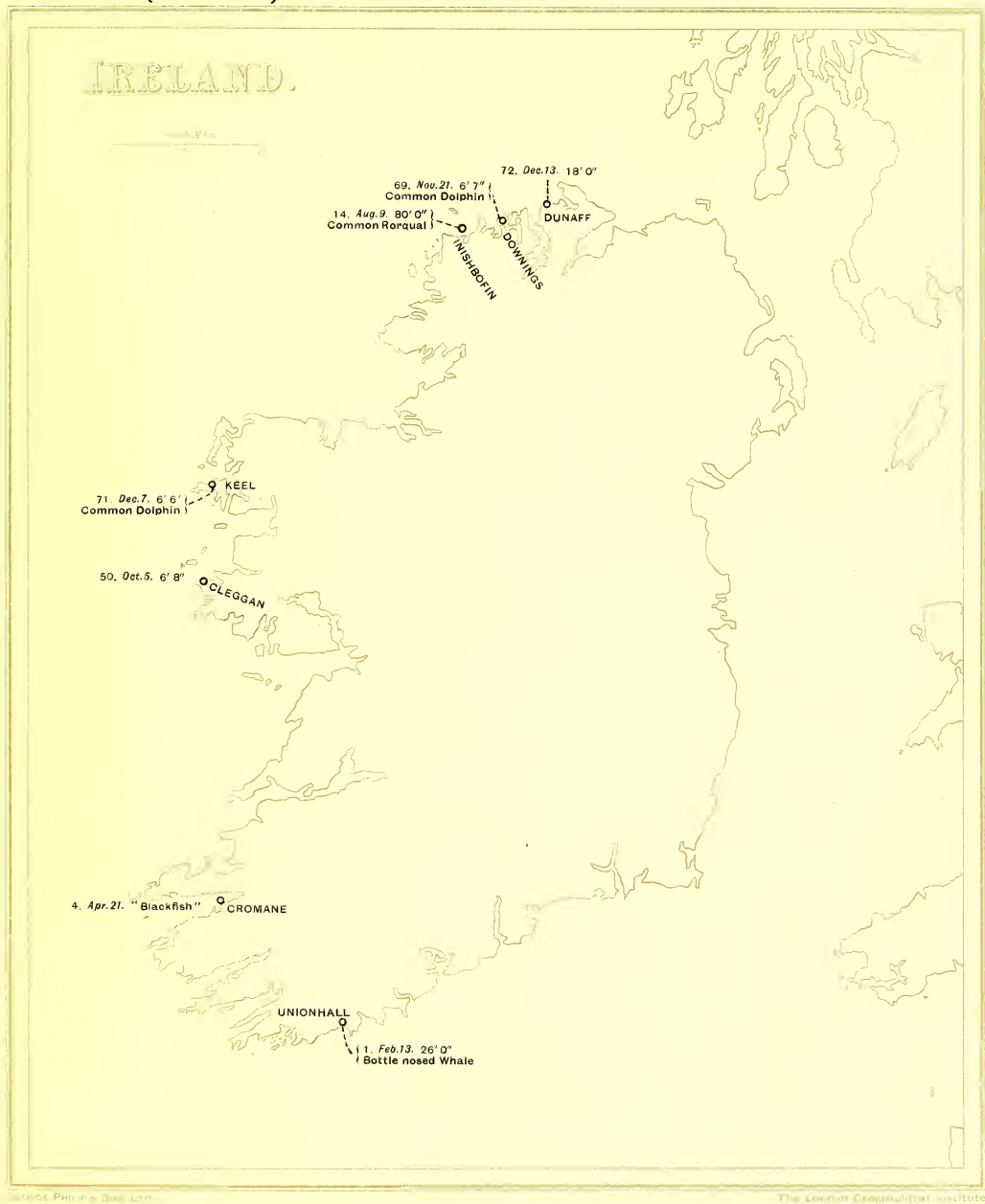
It would no doubt be a mistake to attach great importance to the records for a single year, particularly where so much is uncertain with regard to the species. But enough information has been obtained to indicate that a continuation of the present enquiry is likely to throw some light on the movements of Cetacea along our coasts; and incidentally to result in the acquisition of valuable specimens for the Museum.

* The Port Talbot specimen was known to have been a Rorqual, and it is almost certain that it was *Balaenoptera acutorostrata*.





CETACEA STRANDED DURING 1913



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